

Amendments to the Claims:

1 - 16. (canceled)

17. (new) Polyurethane resin obtainable by

a) reacting an excess of one or more aliphatic diisocyanates with a group of isocyanate-reactive components consisting of one or more polyether polyols each having an average molecular weight in the range of not more than 1500 g/mol, and at least one diamine so as to obtain a prepolymer; and

b) adding a mixture of isophorone diamine and a second diamine selected from the group consisting of ethylenediamine, 1,2-diaminocyclohexane and 2,2,4- or 2,4,4-trimethyldiaminohexane (TMDA) in excess to the free NCO groups of the prepolymer obtained in step a).

18. (new) Polyurethane resin according to claim 17, wherein in step a) as a further isocyanate-reactive component at least one polyol having an having an average molecular weight of equal or less than 800 g/mol is added.

19. (new) Polyurethane resin according to claim 17, wherein in step a) the ratio of equivalent weights of diisocyanate components to isocyanate-reactive components is in a range of between 3.6: 1 and 1.1:1.

20. (new) Polyurethane resin according to claim 17, wherein in step b) the ratio of the second diamine to isophorone diamine is preferably 10:1 to 2:1.

21. (new) Polyurethane resin according to claim 17, wherein in step b) the ratio of equivalent weights of the isocyanate-terminated prepolymer to the mixture of diamine components is in a range of between 1:5 and 1:1.1.

22. (new) Polyurethane resin according to claim 17, having a weight average molecular weight in the range of 20000 to 80000 g/mol.

23. (new) Polyurethane resin according to claim 17, having a degree of urethanisation between 20 and 30%.

24. (new) A method of forming a polyurethane resin, comprising the steps of

a) reacting an excess of one or more aliphatic diisocyanates with a group of isocyanate-reactive components consisting of one or more polyether polyols each having an average molecular weight in the range of not more than 1500 g/mol, and at least one diamine so as to obtain a prepolymer; and

b) adding a mixture of isophorone diamine and a second diamine selected from the group consisting of ethylenediamine, 1,2-diaminocyclohexane and 2,2,4- or 2,4,4-trimethyldiaminohexane (TMDA) in excess to the free NCO groups of the prepolymer obtained in step a).

25. (new) A method according to claim 24, wherein in step b) the mixture of diamines is added to the prepolymer in two separate steps.

26. (new) A method according to claim 25, wherein in the first step approximately one third to about 50% of said mixture of diamines is added to the prepolymer at elevated temperatures of between 60 and 90°C, and in the second step the balance of said mixture of diamines are added at about 45-50°C.

27. (new) A method according to claim 24, wherein in step a) as a further isocyanate-reactive component at least one polyol having an average molecular weight of equal or less than 800 g/mol is added.

28. (new) A method according to claim 24, wherein in step a) the isocyanate-reactive components are added sequentially to the one or more diisocyanates.

29. (new) A coating composition, comprising a solvent and at least one polyurethane resin according to claim 17 as film forming binder.

30. (new) Use of a polyurethane resin according to claim 17 as at least one film forming binder in printing inks for printing plastic substrates.

31. (new) A method of producing a laminate carrying a printed layer, said method comprises the steps of

- a) providing a coating composition according to claim 29;
- b) applying a layer to a first substrate, by printing said printing ink of step a) in a flexographic and/or gravure printing process;
- c) removing said solvent from said layer thereby drying and/or curing said layer obtained in step b),
- d) applying an adhesive to the dried and/or cured layer obtained in step c) and producing the laminate by applying at least a second substrate.

32. (new) A laminate produced by the method of claim 31.